

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



re application of:

Thomas Joseph Pecorini et al.

Group Art Unit: 1714

Serial No.: 10/050,680

Examiner: Callie E. Shosho

Filed: January 15, 2002

For: COLOR CONCENTRATES FOR POLYESTERS

Attorney Docket No.: EACC 0118 PUSP

CORRECTED APPEAL BRIEF UNDER 37 C.F.R. § 41.37

Mail Stop Appeal Brief - Patents
Commissioner for Patents
U.S. Patent & Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This is an Appeal Brief from the final rejection of claims 1, 3-5, 7, 9-11, 13-15 and 18-25 of the Office Action mailed on January 6, 2006 for the above-identified patent application.

I. REAL PARTY IN INTEREST

The real party in interest is Eastman Chemical Company ("Assignee"), a corporation organized and existing under the laws of the state of Delaware, and having a place of business at 100 North Eastman Road, Kingsport, Tennessee, as set forth in the assignment recorded in the U.S. Patent and Trademark Office on March 28, 2002 at Reel 012758/Frame 0056.

CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8 (FIRST CLASS MAIL)

I hereby certify that this paper, including all enclosures referred to herein, is being deposited with the United States Postal Service as first-class mail, postage pre-paid, in an envelope addressed to: Mail Stop Appeal Brief - Patents, Commissioner for Patents, U.S. Patent & Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450 on:

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II. RELATED APPEALS AND INTERFERENCES

There are no appeals or interferences known to the Appellant, the Appellant's legal representative, or the Assignee which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Claims 1, 3-5, 7, 9-11, 13-15 and 18-25 are pending in this application. Claims 1, 3-5, 7, 9-11, 13-15 and 18-25 have been rejected and are the subject of this appeal.

IV. STATUS OF AMENDMENTS

An amendment after final rejection was not filed.

V. SUMMARY OF CLAIMED SUBJECT MATTER

In one embodiment as disclosed in independent claim 1, the present invention provides a concentrate that is useful for coloring a base polyester (Specification p. 3, ll. 21-22). The concentrate of this embodiment comprises one or more colorants, and from about 20 wt. % to about 80 wt. % of one or more copolymers (Specification p. 8, ll. 23-26; p. 9, ll. 21-22). The copolymers in turn comprise one or more of olefin/acrylate copolymer or olefin/methacrylate copolymer (Specification p. 6, ll. 23-29). The olefin component of the copolymer include from about 40 wt. % to about 99 wt. % of the copolymer (Specification p. 7, ll. 6-8). The copolymer comprises one or more of ethylene methyl acrylate copolymers (EMA), ethylene methyl methacrylate copolymers (EMMA), ethylene ethyl methacrylate copolymers (EEMA), ethylene butyl acrylate copolymers (EBA), or ethylene butyl methacrylate copolymers (EBMA) (Specification p. 8, ll. 3-8). The wt. % is measured by total weight of the concentrate. Advantageously, the concentrate does not comprise a low melt viscosity resin and provides a polyester composition having a moisture content of less than

about 0.1 wt. % as measured by total weight of the polyester composition when the concentrate is combined with a base polyester (Specification p. 8, ll. 19-22; p. 10, ll. 19-24).

In another embodiment of the invention as disclosed in independent claim 10, a method for preparing a colored polyester composition from the concentrate set forth above is provided. The method of this embodiment comprises adding a color concentrate to a base polyester material (Specification p. 10, ll. 5-6). The concentrates used include one or more colorants and from about 20 wt. % to about 80 wt. % of a copolymer (Specification p. 8, ll. 23-26; p. 9, ll. 21-22). The copolymers include one or more of an olefin/acrylate copolymer or olefin/methacrylate copolymer (Specification p. 6, ll. 23-29). The olefin component of the copolymer comprises from about 40 wt. % to about 99 wt. % of the copolymer (Specification p. 7, ll. 6-8). The copolymer comprises one or more of ethylene methyl acrylate copolymers (EMA), ethylene methyl methacrylate copolymers (EMMA), ethylene ethyl acrylate copolymers (EEA), ethylene ethyl methacrylate copolymers (EEMA), ethylene butyl acrylate copolymers (EBA), or ethylene butyl methacrylate copolymers (EBMA) (Specification p. 8, ll. 3-8). The concentrate does not comprise a low melt viscosity resin, and the wt. % of the concentrate is measured by total weight of the copolymer and colorant (Specification p. 8, ll. 19-22). Advantageously, the composition has a moisture content of less than about 0.1 wt. %, as measured by total weight of the composition (Specification p. 10, ll. 19-24).

In another embodiment of the present invention as disclosed in independent claim 19, another method of coloring a polyester composition is provided. The method of this embodiment includes a step of adding a concentrate to a base polyester (Specification p. 10, ll. 5-6). The concentrate includes a copolymer comprising one or more of ethylene methyl acrylate copolymers (EMA), ethylene methyl methacrylate copolymers (EMMA), ethylene ethyl acrylate copolymers (EEA), ethylene ethyl methacrylate copolymers (EEMA), ethylene butyl acrylate copolymers (EBA), or ethylene butyl methacrylate copolymers (EBMA), and one or more colorants (Specification p. 8, ll. 3-8; p. 8, ll. 23-26; p. 9, ll. 21-22). The concentrate

is further characterized as not comprising a low melt viscosity resin (Specification p. 8, ll. 19-22). Advantageously, the composition has a moisture content of less than about 0.1 wt. %, as measured by total weight of the composition (Specification p. 10, ll. 19-24). Finally, a colored polyester composition is obtained such that the copolymer includes an olefin component in an amount from about 40 wt. % to about 99 wt. % of the copolymer (Specification p. 7, ll. 6-8).

In yet another embodiment of the present invention as disclosed in independent claim 21, a polyester composition comprising a base polyester and a concentrate present in an amount from about 0.1 % to about 10 % of the total weight of the polyester composition is provided. Again, advantageously, the polyester composition has a moisture content of less than about 0.1 wt. % as measured by total weight of the polyester composition (Specification p. 10, ll. 19-24). The concentrate of this embodiment includes one or more colorants and from about 20 wt. % to about 80 wt. % of one or more copolymers (Specification p. 8, ll. 23-26; p. 9, ll. 21-22). The copolymers comprise one or more of olefin/acrylate copolymer or olefin/methacrylate copolymer (Specification p. 6, ll. 23-29). The olefin component of the copolymer comprises from about 40 wt. % to about 99 wt. % of the copolymer (Specification p. 7, ll. 6-8). Specifically, the copolymer comprises one or more of ethylene methyl acrylate copolymers (EMA), ethylene methyl methacrylate copolymers (EMMA), ethylene ethyl acrylate copolymers (EEA), ethylene ethyl methacrylate copolymers (EEMA), ethylene butyl acrylate copolymers (EBA), or ethylene butyl methacrylate copolymers (EBMA). (Specification p. 8, ll. 3-8). Again, the concentrate does not comprise a low melt viscosity resin and the wt. % of the copolymer is measured by total weight of the concentrate (Specification p. 8, ll. 19-22; p. 10, ll. 19-24).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 10-11, 13-15, and 18-25 stand rejected under 35 U.S.C. § 102(b) as being anticipated by JP 54129050.

Claims 1, 3, 10-11, 13, 18-22, and 24-25 stand rejected under 35 U.S.C. 102(b) as being anticipated by EP 370424.

Claims 1, 3-5, 7, and 9 stand rejected under 35 U.S.C. 103(a) as being unpatentable over JP 54129050 in view of EP 370424.

Claims 4-5, 7, 9, 14-15 and 23 stand rejected under 35 U.S.C. § 103(a) over EP 370424.

VII. ARGUMENT**A. Claims 10-11, 13-15, and 18-25 Are Patentable Under 35 U.S.C. § 102(b) Over U.S. Patent No. JP 54129050**

Appellants respectfully traverse the Examiner's rejection of claims 10-11, 13-16, and 18-25 under 35 U.S.C. § 102(b) for the reasons set forth below. Independent claims 10, 19, and 21 include a limitation on the moisture content requiring that it be "less than about 0.1 wt. %, as measured by total weight of the composition." JP 54129050 does not disclose such a limitation. The Examiner attempts to include this significant missing limitation regarding moisture content with an inherency argument. However, the Examiner's inherency argument is clearly inopposite to the law regarding inherency. The Federal Circuit has consistently held that:

Before a reference can be found to disclose a feature by virtue of its inherency, one of ordinary skill in the art viewing the reference must understand that **the unmentioned feature at issue is necessarily present in the reference**. Continental Can, 948 F.2d at 1268-69, 20 USPQ 2d at 1749-50. The test of inherency is not satisfied by what a reference "may" teach. Id., 20 USPQ 2d at 1749-50 ("Inherency . . . may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.")

SGS-Thomson Microelectronics, Inc. v. International Rectifier Corp., 32 USPQ 2d 1496, 1503 (Fed. Cir.) (unpublished), cert. denied, 513 U.S. 1052 (1994) (emphasis added).

Application of inherency to imply a specific moisture content is inappropriate. Moisture like any component in a composition can take on virtually any value. Therefore, the requisite for inherency that the "unmentioned feature at issue is necessarily present in the reference" is not met.

In the Final Office Action dated January 6, 2006, the Examiner responds to the Appellants' inherency analysis with speculation. The Examiner states:

However, it is the examiner's position that moisture content is inherent to the presently claimed polyester composition. Evidence to support this position is found in present claim 1, for instance, which recites that the concentrate "provides a polyester composition having a moisture content of less than about 0.1 wt%" when the concentrate is combined with a base polyester. Thus, it is clear that the concentrate determines the moisture content of the polyester composition. Further evidence to support this position is found in applicants' specification where Table 1 shows that the moisture content is dependent on the color concentrate utilized in the polyester composition. **Thus, it appears that the moisture content of the polyester composition does depend on the color concentrate utilized.**

Final Office Action dated January 6, 2006 (Emphasis added)

The Examiner has apparently mistaken the use of the word "when" in claim 1 as providing a cause and effect relationship between the moisture content and the combining of the concentrate with a base polyester. However, the correct interpretation is that the word "when" merely states the condition of the moisture content at the time of combining the concentrate with the base polyester. The Examiner attempts to bolster her argument by referring to Table 1 of Appellants' specification. The Examiner completely misinterprets this table. Table 1 provides comparative examples to the present invention. As is clear from Table 1, a number of these comparative additives are not concentrates per se but are merely color additives (e.g., Holland white powder, Hanna white PET base pellets). The Examiner's interpretation of Table 1 is not reasonable and is not the Appellants' interpretation.

The Examiner attempts to further justify her analysis by misapplying case law to the present rejections. The Examiner states:

It is noted that the courts have held that "a **compound** and all its properties are mutually inseparable" In re Papesch, 315F.2d 381, 137 USPQ 42, 51 (CCPA 1963). Further attention is drawn to MPEP 2112.01, which states that "products of identical chemical composition can not have mutually exclusive properties, A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present." In Re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

Final Office Action dated January 6, 2006 (emphasis added)

Appellants point out that the present invention is not directed to a chemical compound with a specific chemical structure. Instead, the composition of the present invention is a mixture which is, of course, very dependent on the substitute ingredients and the concentrations of

these ingredients. Put simply, the moisture content can take any value which can be adjusted by the moisture content of the ingredients used, by combining under humid conditions, by intentionally pouring water in, or by any of a multitude of conditions known to any chemist. For at least these reasons, the Examiners use of inherency to provide the moisture content is inappropriate.

Accordingly, claims 10-11, 13-16, and 18-25 are patentable under 35 U.S.C. 102(b) over JP 54129050.

B. Claims 1, 3, 10-11, 13,18-22, and 24-25 Are Patentable Under 35 U.S.C. § 102(b) Over U.S. Patent No. JP EP 370424

Appellants respectfully traverse the Examiners rejections of claims 1, 3, 10-11, 13,18-22, and 24-25 under 35 U.S.C. § 102(b) for the reasons set forth below. EP 370424 also does not disclose a composition with a moisture content less than “about 0.1 wt. %, as measured by total weight of the composition” as required by independent claims 1, 10, 19, and 21. Again, the Examiner attempts to provide the missing limitation by inherency. For the same reasons set forth above, application of inherency is inappropriate.

Accordingly, claims 1, 3, 10-11, 13,18-22, and 24-25 are patentable under 35 U.S.C. 102(b) over EP 370424.

C. Claims 1, 3-5, 7, and 9 Are Patentable Under 35 U.S.C. § 103(a) Over U.S. Patent No. JP 54129050 in View of EP 370424

Appellants respectfully traverse the Examiner’s rejection under 35 U.S.C. 103(a) for similar reasons as set forth above. Neither the JP 54129050 reference nor the EP 370424 reference disclose a composition with a moisture content “less than about 0.1 wt. %” as required by independent claim 1. The inappropriateness of utilizing inherency (which is a

102 argument anyway) to supply this missing limitation is set forth above. Accordingly, independent claim 1 along with its dependent claims 3-5, 7, and 9 are patentable under 35 U.S.C. 103(a) over JP 54129050 in view of EP 370424.

D. Claims 4-5, 7, 9, 14-15, and 23 Are Patentable Under 35 U.S.C. § 103(a) Over EP 370424

Appellants respectfully traverse the Examiner's rejection under 35 U.S.C. 103(a) for similar reasons as set forth above. The EP 370424 reference discloses a composition with a moisture content "less than about 0.1 wt. %" as required by independent claims 1, 10, and 21. Claims 4-5, 7 and 9 depend from claim 1, claims 14-15 depend from independent claim 10, and claim 23 depends from claim 21. The inappropriateness of utilizing inherency to supply this missing limitation is set forth above. Accordingly, claims 1, 3-5, 7, 9, 14-15, and 23 are patentable under 35 U.S.C. 103(a) over JP 54129050 in view of EP 370424 since these claims depend from an independent claim that is shown to be allowable.

Please charge any additional fees or credit any overpayment in connection with this filing to our Deposit Account No. 02-3978.

Respectfully submitted,
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Enclosure - Appendices



VIII. CLAIMS APPENDIX

1. A concentrate for coloring a base polyester comprising:
 - a) one or more colorants; and
 - b) from about 20 wt. % to about 80 wt. % of one or more copolymers comprising one or more of olefin/acrylate copolymer or olefin/methacrylate copolymer wherein the olefin component of the copolymer comprises from about 40 wt. % to about 99 wt. % of the copolymer and wherein the copolymer comprises one or more of:ethylene methyl acrylate copolymers (EMA), ethylene methyl methacrylate copolymers (EMMA), ethylene ethyl methacrylate copolymers (EEMA), ethylene butyl acrylate copolymers (EBA), or ethylene butyl methacrylate copolymers (EBMA);

wherein the wt. % is measured by total weight of the concentrate and wherein the concentrate does not comprise a low melt viscosity resin and provides a polyester composition having a moisture content of less than about 0.1 wt. % as measured by total weight of the polyester composition when the concentrate is combined with a base polyester.

2. (Cancelled)
3. The concentrate of claim 1, wherein the copolymer is present in the concentrate at from about 20 wt. % to about 60 wt. %, as measured by total weight of the concentrate.
4. A polyester composition comprising the concentrate of claim 1 and a base polyester, wherein the concentrate is present at from about 0.1 wt. % to about 10 wt. %, as measured by total weight of the composition.

5. The polyester composition of claim 4, wherein the concentrate is present in the composition at from about 1 wt. % to about 5 wt. %, as measured by total weight of the composition.

6. (Cancelled)

7. The polyester composition of claim 4, wherein the inherent viscosity of the composition is equal to or less than about 0.04 g/dL below the inherent viscosity of the base polyester.

8. (Cancelled)

9. A molded article prepared from the polyester composition of claim 4.

10. A method for preparing a colored polyester composition comprising:

a. adding a color concentrate to a base polyester material, wherein the concentrate comprises:

- i. one or more colorants; and
- ii. from about 20 wt. % to about 80 wt. % of a copolymer comprising one or more of: olefin/acrylate copolymer or olefin/methacrylate copolymer wherein the olefin component of the copolymer comprises from about 40 wt. % to about 99 wt. % of the copolymer and wherein the copolymer comprises one or more of:
ethylene methyl acrylate copolymers (EMA),
ethylene methyl methacrylate copolymers (EMMA), ethylene ethyl acrylate copolymers (EEA), ethylene ethyl methacrylate copolymers

(EEMA), ethylene butyl acrylate copolymers (EBA), or ethylene butyl methacrylate copolymers (EBMA),

wherein the concentrate does not comprise a low melt viscosity resin and the wt. % of the concentrate is measured by total weight of the copolymer and colorant and wherein the composition has a moisture content of less than about 0.1 wt. %, as measured by total weight of the composition.

11. The method of claim 10, wherein the inherent_viscosity of the composition is equal to or less than about 0.04 g/dL below the inherent_viscosity of the base polyester.

12. (Cancelled)

13. The method of claim 10, wherein the copolymer is present in the concentrate at from about 20 wt. % to about 60 wt. %, as measured by total weight of the concentrate.

14. The method of claim 10, wherein the concentrate is present from about 0.1 wt. % to about 10 wt. %, as measured by total weight of the composition.

15. The method of claim 10, wherein the concentrate is present at from about 1 wt. % to about 5 wt. %, as measured by total weight of the composition.

16. (Cancelled)

17. (Cancelled)

18. The method of claim 10, further comprising the step of forming the colored polyester composition into a molded article.

19. A method of coloring a polyester composition consisting essentially of adding to a base polyester a concentrate comprising copolymer comprising one or more of ethylene methyl acrylate copolymers (EMA), ethylene methyl methacrylate copolymers (EMMA), ethylene ethyl acrylate copolymers (EEA), ethylene ethyl methacrylate copolymers (EEMA), ethylene butyl acrylate copolymers (EBA), or ethylene butyl methacrylate copolymers (EBMA), one or more colorants, wherein the concentrate does not comprise a low melt viscosity resin and wherein the composition has a moisture content of less than about 0.1 wt. %, as measured by total weight of the composition, thereby providing a colored polyester composition wherein the copolymer includes an olefin component in an amount from about 40 wt. % to about 99 wt. % of the copolymer.

20. The method of claim 19, wherein the copolymer is added at from about 2 wt. %, to about 40 wt. %, as measured by total weight of the composition.

21. A polyester composition comprising a base polyester and a concentrate present in an amount from about 0.1 % to about 10 % of the total weight of the polyester composition wherein the polyester composition has a moisture content of less than about 0.1 wt. % as measured by total weight of the polyester composition, the concentrate comprising:

- a) one or more colorants; and
- b) from about 20 wt. % to about 80 wt. % of one or more copolymers comprising one or more of olefin/acrylate copolymer or olefin/methacrylate copolymer wherein the olefin component of the copolymer comprises from about 40 wt. % to about 99 wt. % of the copolymer and wherein the copolymer comprises one or more of:

ethylene methyl acrylate copolymers (EMA), ethylene methyl methacrylate copolymers (EMMA), ethylene ethyl acrylate copolymers (EEA), ethylene ethyl methacrylate copolymers (EEMA), ethylene butyl acrylate copolymers (EBA), or ethylene butyl methacrylate copolymers (EBMA);

wherein the concentrate does not comprise a low melt viscosity resin and the wt. % of the copolymer is measured by total weight of the concentrate .

22. The concentrate of claim 21, wherein the copolymer is present in the concentrate at from about 20 wt. % to about 60 wt. %, as measured by total weight of the concentrate.

23. The polyester composition of claim 21, wherein the concentrate is present in the composition at from about 1 wt. % to about 5 wt. %, as measured by total weight of the composition.

24. The polyester composition of claim 21, wherein the inherent viscosity of the composition is equal to or less than about 0.04 g/dL below the inherent viscosity of the base polyester.

25. A molded article prepared from the polyester composition of claim 21.

IX. EVIDENCE APPENDIX

“None”

X. RELATED PROCEEDINGS APPENDIX

“None”